TASK 5 –Maven Creation

Step 1: Creating folder

Create a folder and clone the repository

```
thamil@LAPTOP-EIEIUD80:~$ mkdir task5
thamil@LAPTOP-EIEIUD80:~$ cd task5
thamil@LAPTOP-EIEIUD80:~/task5$ git clone https://github.com/AranganathanPrakash/spring-framework-petclinic.git
Cloning into 'spring-framework-petclinic'...
remote: Enumerating objects: 7359, done.
remote: Counting objects: 100% (1118/1118), done.
remote: Compressing objects: 100% (88/88), done.
remote: Total 7359 (delta 1061), reused 1030 (delta 1030), pack-reused 6241 (from 1)
Receiving objects: 100% (7359/7359), 3.12 MiB | 2.93 MiB/s, done.
Resolving deltas: 100% (3602/3602), done.
thamil@LAPTOP-EIEIUD80:~/task5$ ls
spring-framework-petclinic
```

Step 2: Installing maven

Installing maven using -- sudo apt install maven

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ sudo apt install maven
[sudo] password for thamil:
Sorry, try again.
[sudo] password for thamil:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
maven is already the newest version (3.8.7-2).
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
```

Step 3: Checking

See if the maven is installed or not

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ mvn --version
Apache Maven 3.8.7
Maven home: /usr/share/maven
Java version: 17.0.14, vendor: Ubuntu, runtime: /usr/lib/jvm/java-17-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.15.167.4-microsoft-standard-wsl2", arch: "amd64", family: "unix"
```

Step 4: Testing

Test the maven

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] -------< org.springframework.samples:spring-framework-petclinic >-------
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] --------------------------------[ war ]---------------------------------
[INFO]
[INFO] --- maven-enforcer-plugin:3.4.1:enforce (enforce-maven) @ spring-framework-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.version.RequireMavenVersion passed
[INFO]
[INFO] --- jacoco-maven-plugin:0.8.11:prepare-agent (prepare-agent) @ spring-framework-petclinic ---
[INFO] argLine set to -javaagent:/home/thamil/.m2/repository/org/jacoco/org.jacoco.agent/0.8.11/org.jacoco.agent-0.8.11-runtime.jar=destfile=/ho
me/thamil/task5/spring-framework-petclinic/target/jacoco.exec
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:resources (default-resources) @ spring-framework-petclinic ---
[INFO] Copying 21 resources from src/main/resources to target/classes
[INFO]
[INFO] --- maven-compiler-plugin:3.11.0:compile (default-compile) @ spring-framework-petclinic ---
[INFO] Changes detected - recompiling the module! :source
[INFO] Compiling 47 source files with javac [debug target 17] to target/classes
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:testResources (default-testResources) @ spring-framework-petclinic ---
[INFO] Copying 11 resources from src/test/java to target/test-classes
[INFO] Copying 1 resource from src/test/resources to target/test-classes
[INFO]
```

Step 5: Clean

Clean the maven

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ mvn clean
[INFO] Scanning for projects...
[INFO]
[INFO] -------< org.springframework.samples:spring-framework-petclinic >-------
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] --------------------------------[ war ]---------------------------------
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ spring-framework-petclinic ---
[INFO] Deleting /home/thamil/task5/spring-framework-petclinic/target
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  0.335 s
[INFO] Finished at: 2025-03-22T04:44:14Z
[INFO] ------------------------------------------------------------------------
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ mvn install
[INFO] Scanning for projects...
[INFO]
[INFO] -------< org.springframework.samples:spring-framework-petclinic >-------
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] --------------------------------[ war ]---------------------------------
[INFO]
[INFO] --- maven-enforcer-plugin:3.4.1:enforce (enforce-maven) @ spring-framework-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.version.RequireMavenVersion passed
[INFO]
[INFO] --- jacoco-maven-plugin:0.8.11:prepare-agent (prepare-agent) @ spring-framework-petclinic ---
[INFO] argLine set to -javaagent:/home/thamil/.m2/repository/org/jacoco/org.jacoco.agent/0.8.11/org.jacoco.agent-0.8.11-runtime.jar=destfile=/ho
me/thamil/task5/spring-framework-petclinic/target/jacoco.exec
[INFO]
```

Step 6: Login in docker

Login in the docker using the username

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ docker login
Authenticating with existing credentials... [Username: thamilvasanth]

i Info → To login with a different account, run 'docker logout' followed by 'docker login'


Login Succeeded
```

Step 7: Push

Push the image inside the docker

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ docker tag petclinic thamilvasanth/petclinic
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ docker push thamilvasanth/petclinic
Using default tag: latest
The push refers to repository [docker.io/thamilvasanth/petclinic]
7b3551d7ff2a: Pushed
5f70bf18a086: Mounted from library/tomcat
6fbdf02a6a33: Mounted from library/tomcat
49cb1bc2daeb: Mounted from library/tomcat
4e5b554b7345: Mounted from library/tomcat
39cf0ac89a5a: Mounted from library/tomcat
f844dcf94898: Mounted from library/tomcat
3359bc3d7a6a: Mounted from library/tomcat
4b7c01ed0534: Mounted from library/tomcat
latest: digest: sha256:4a01db138eae2a8ca94bff08d38c112f610e75505ea7f69eeeb97d6ba9f06c13 size: 2413
```

Step 8: Minikube

Start the minikube

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ minikube start
😄  minikube v1.35.0 on Ubuntu 24.04 (amd64)
✨  Using the docker driver based on existing profile
👍  Starting "minikube" primary control-plane node in "minikube" cluster
🚜  Pulling base image v0.0.46 ...
🏃  Updating the running docker "minikube" container ...
🐳  Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
🔎  Verifying Kubernetes components...
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟  Enabled addons: default-storageclass, storage-provisioner
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

Step 9: Deployment creation

Create a deployment named petclinic

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ kubectl create deployment petclinic --image=thamilvasanth/petclinic
deployment.apps/petclinic created
```

Step 10: Deployment exposure

Expose the deployment in the kubectl

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ kubectl expose deployment petclinic --port=8080
service/petclinic exposed
```

Step 11: Service

Check the service of the petclinic webpage

```
thamil@LAPTOP-EIEIUD80:~/task5/spring-framework-petclinic$ minikube service petclinic
|-----------|-----------|-------------|--------------|
| NAMESPACE |   NAME    | TARGET PORT |     URL      |
|-----------|-----------|-------------|--------------|
| default   | petclinic |             | No node port |
|-----------|-----------|-------------|--------------|
😿  service default/petclinic has no node port
❗  Services [default/petclinic] have type "ClusterIP" not meant to be exposed, however for local development minikube allows you to access this !
🏃  Starting tunnel for service petclinic.
|-----------|-----------|-------------|------------------------|
| NAMESPACE |   NAME    | TARGET PORT |          URL           |
|-----------|-----------|-------------|------------------------|
| default   | petclinic |             | http://127.0.0.1:38385 |
|-----------|-----------|-------------|------------------------|
🎉  Opening service default/petclinic in default browser...
👉  http://127.0.0.1:38385
❗  Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

Step 12: Output

The output page is displayed in the localhost:44929